#### IN THE CLAIMS:

Please amend claims 21 to 38 as follows:

A complete listing of all the claims is presented herewith:

Claims 1 to 20. (Cancelled).

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#### Claim 21. (Currently Amended).

A thermoplastic vulcanizate comprised of four components (A,B,C,D), notably comprising

- a thermoplastic synthetic resin (A);
- a substantially non-cross-linked polyethylene (B);
- a rubber ©) having a degree of cross-linking of > 90% and being compatible with the thermoplastic synthetic resin

  (A) in regard to the phase inversion; and
- a plasticizer (D);

as well as of the standard blend ingredients (E) comprising at least one cross-linking agent or cross-linking system, whereby a the mixture is comprised of the following quantitative proportions (in % by weight) based on the sum of the four components (A, B, C, D):

- Thermoplastic thermoplastic

synthetic resin (A)

5 to 20

- Polyethylene polyethylene (B)

25 to 5 or 15 to 5

- Rubber rubber (C)

30 to 50

- <del>Plasticizer</del> <u>plasticizer</u> (D)

40 to 25 or 50 to 25

# Claim 22. (Currently Amended).

2421

The thermoplastic vulcanizate according to claim 21, characterized in that wherein the standard ingredients (E) of the blend are added in from 0.02 to 0.5 times the amount by weight based on the sum of the four components (A, B, D, D).

27/2

# Claim 23. (Currently Amended).

The thermoplastic vulcanizate according to claim 21, characterized in that wherein the thermoplastic synthetic resin (A) is a polypropylene based on a homopolymer, block polymer or copolymer preferably in conjunction with high crystallinity.

24/2

#### Claim 24. (Currently Amended).

The thermoplastic vulcanizate according to claim 21, characterized in that wherein the polyethylene (B) is a VLDPE with a density of from 0.88 to 0.91 g/cm $^3$  at 20 $^{\circ}$ C

and/or a ULDPE with a density of from 0.85 to 0.88 g/cm $^3$  at  $20^{\circ}\text{C}$ .

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# Claim 25. (Currently Amended).

The thermoplastic vulcanizate according to claim 21, characterized in that wherein the rubber (C) is an EPDM rubber, whereby the third monomer is preferably an ethylidene-norbonene.

26/21

#### Claim 26. (Currently Amended).

The thermoplastic vulcanizate according to claim 21, characterized in that wherein the rubber (C) has a degree of cross-linking of > 90%, preferably > 95%.

27/21

# Claim 27. (Currently Amended).

The thermoplastic vulcanizate according to claim 21, characterized in that wherein the plasticizer (D) is a plasticizer oil, in particular or a paraffinic oil with a component of aromatics of <4% by weight, preferably or a paraffinic plasticizer oil free of aromatics.

## Claim 28. (Currently Amended).

A method for producing a thermoplastic vulcanizate according to claim 21, of four components (A, B, C, D), comprising

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- a thermoplastic synthetic resin (A);

- a substantially non-cross-linked polyethylene (B);

- a rubber (C) having a degree of cross-linking of > 90% and

- a plasticizer (D);

as well as of standard blend ingredients (E) comprising at

least one cross-linking agent or cross-linking system,

whereby a mixture is comprised of the following quantitative

proportions (in % by weight) based on the sum of the four

components (A, B, D, D):

- thermoplastic synthetic resin (A) 5 to 20

- polyethylene (B)
25 to 5 or 15 to 5

<u>- rubber (C)</u> <u>30 to 50</u>

- plasticizer (D) 40 to 25 or 50 to 25

wherein characterized in that the rubber (C) in the still-unvulcanized state is first mixed with a plasticizer (D) and the standard blend ingredients (E) in a roll or screw extruder, whereby the standard blend ingredients preferably still do not yet contain a cross-linking agent or cross-linking system.



### Claim 29. (Currently Amended).

24/28

The method for producing a thermoplastic vulcanizate according to claim 28, characterized by comprising the following process steps:

- Br
- feeding of the unvulcanized rubber (C) and the standard blend ingredients (E);
- meltdown and dispersion of the rubber (C) as well as of the standard blend ingredients (E); and
- addition of the plasticizer (D) while mixing with the two charged components (C), (E).

## Claim 30. (Currently Amended).

30/28

The method for producing a thermoplastic vulcanizate according to claim 28,

characterized in that wherein the plasticizer (D) and the standard blend ingredients (E) are admixed into the unvulcanized rubber (C) in the first third part of the roll or screw extruder.

## Claim 31. (Currently Amended).

31/28

The method for producing a thermoplastic vulcanizate according to claim 28,

characterized in that wherein mixture comprised of the thermoplastic synthetic resin (A), and the non-cross-linked polyethylene (B) is added downstream of the first third part of the roll or screw extruder.

# Claim 32. (Currently Amended).

32/21

The method for producing a thermoplastic vulcanizate according to claim 21,

characterized in that wherein in a roll or screw extruder, the rubber (C) in the still-unvulcanized state is substantially simultaneously mixed with the thermoplastic synthetic resin (A), the non-cross-linked polyethylene (B), the plasticizer (D) and the standard blend ingredients (E), whereby the standard blend ingredients preferably do not yet contain a cross-linking agent or cross-linking system.

### Claim 33. (Currently Amended).

The method for producing a thermoplastic vulcanizate according to claim 32,

characterized in that wherein the thermoplastic synthetic resin (A), the non-cross-linked polyethylene (B), the plasticizer (D) and the standard blend ingredients (E) are admixed into the unvulcanized rubber (C) in the first third part of the roll or screw extruder.

#### Claim 34. (Currently Amended).

The method for producing a thermoplastic vulcanizate according to claim 28,

characterized in that wherein a non-cross-linked rubber (C) is used, said rubber being present in a flowable state,

33/42/21

34/28

preferably in the form of a flowable pellet or granulate.

BU

# Claim 35. (Currently Amended).

35/28

The method for producing a thermoplastic vulcanizate according to claim 28,

characterized in that wherein following mixing of the four components (A, B, C, D) and the standard blend ingredients (E) without the cross-linking agent or cross-linking system, the cross-linking agent or the cross-linking system is now added in conjunction with the following steps of the process:

- Dynamic dynamic vulcanization of the rubber (C) at high shear and expansion rates;
- degassing of the dynamically vulcanized plastic melt,
   in particular under vacuum; and
- building up the pressure for ejecting the thermoplastic vulcanizate from the mold.

3

## Claim 36. (Currently Amended).

The method for producing a thermoplastic vulcanizate according to claim 35,

characterized in that wherein all steps of the method connected with the addition of the cross-linking agent or cross-linking system are carried out in the second half of the roll or screw extruder.

## Claim 37. (Currently Amended).

37/28

The method for producing a thermoplastic vulcanizate according to claim 28,

wherein characterized in that a cross-linking agent or cross-linking system is used that cross-links the rubber (C) on the one hand, and prevents the polyethylene (B) from cross-linking on the other, preferably based on a phenolic resin, in particular again in connection with an accelerator consisting of tin dichloride.

## Claim 38. (Currently Amended).

The method for producing a thermoplastic vulcanizate according to claim 28,

characterized in that wherein the preparation of the mixture comprised of the four components (A, B, C, D) and all of the standard blend ingredients (E) is carried out in a single-stage process.